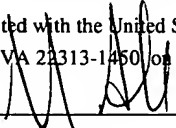




PATENT  
Docket No. SPLX.P0089

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\_\_\_\_\_  
Mani Adeli

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

Steven Teig

Serial No.: 10/047,978

Filing Date: 1/13/02

For: **PROBABILISTIC ROUTING METHOD  
AND APPARATUS**

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. § 1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit with this Information Disclosure Statement the attached Form PTO-1449, and copies of the documents listed in the 1449 form for consideration by the Examiner. The Examiner is requested to make these documents of record. Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

03/29/2004 SSESHE1 00000066 10047978

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This Information Disclosure Statement is submitted: After receipt of a first Office Action on the merits but before a final Office Action or Notice of Allowance. A fee is required. A fee in the amount of \$180 is enclosed.

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-1128** referencing SPLX.P0089. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: March 22, 2004

Respectfully submitted,

By: \_\_\_\_\_

**Mani Adeli**  
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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

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of

1

Application Number 10/047,978

Filing Date 1/13/02

First Named Inventor Steven Teig

Group Art Unit 2812

Examiner Name Stacy A. Whitmore

Attorney Docket Number SPLX.P0089

## U.S. PATENT DOCUMENTS

Examiner* Initials	Cite No. <sup>1</sup>	U.S. Patent Document Number Kind Code <sup>2</sup> (if known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2002/0182 844 A1	12-05-2002	Igarashi et al.	
	2.	2003/0053 399 A1	01-02-2003	Igarashi et al.	
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## NON PATENT LITERATURE DOCUMENTS

Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	10.	Hu, J. et al., A Timing-Constrained Algorithm for Simultaneous Global Routing of Multiple Nets, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000, pp.99-103.	
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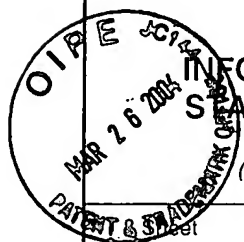
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1				of	6	Application Number	10/047,978
						Filing Date	1/13/02
						First Named Inventor	Steven Teig
						Group Art Unit	2812
						Examiner Name	Stacy A. Whitmore
						Attorney Docket Number	SPLX.P0089

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		Number	Kind Code <sup>2</sup> (if known)			
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	2.	4,593,363		06-03-1986	Burstein et al.	
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	20.	6,316,838	B1	11-13-2001	Ozawa et al.	
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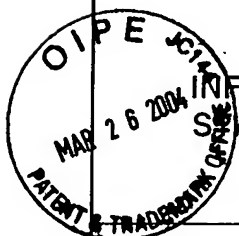
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Sheet	2	of	6	Application Number	10/047,978
				Filing Date	1/13/02
				First Named Inventor	Steven Teig
				Group Art Unit	2812
				Examiner Name	Stacy A. Whitmore
				Attorney Docket Number	SPLX.P0089

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31.	6,557,145	B2	04-29-2003	Boyle et al.
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		Office <sup>2</sup>	Number <sup>4</sup>	Kind Code (if known) <sup>5</sup>				
	33.	JP	411296560	A	10-29-1999	Matsumoto et al.	with English translation of Abstract;	
	34.	JP	2000-82743	A	03-21-2000	Igarashi et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√
	35.	JP	H03-173471	A	07-26-1991	Tawada et al.	with Japanese Patent Office's English translation of Abstract; and with English	√

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Sheet

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of

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First Named Inventor

Steven Teig

Group Art Unit

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Examiner Name

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Attorney Docket Number

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**FOREIGN PATENT DOCUMENTS**

							translation of the application.	
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39.	JP	H09-162279	A	06-20-1997	Masaaki Yohsida		with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√

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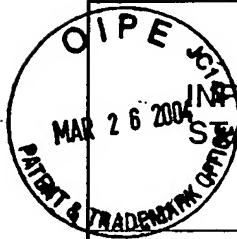
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				Examiner Name	Stacy A. Whitmore
				Attorney Docket Number	SPLX.P0089

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Substitute for form 1449A/PTO				Application Number	10/047,978
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Filing Date	1/13/02
				First Named Inventor	Steven Teig
				Group Art Unit	2812
				Examiner Name	Stacy A. Whitmore
(use as many sheets as necessary)				Attorney Docket Number	SPLX.P0089
Sheet	6	of	6		

### NON PATENT LITERATURE DOCUMENTS

68.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28 <sup>th</sup> ACM/IEEE Automation Conference, 1991, pp. 49-53.	
69.	Wang, M. et al., Modeling and Minimization of Routing Congestion, Jan. 2000, IEEE proceedings of ASP-DAC, Asia and South Pacific, pp. 185-190.	
70.	Wood, G. et al., FPGA Routing and Routability Estimation Via Boolean Satisfiability, Department of Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA, pp. 119-125.	
71.	Zhang, C.X. et al., Floorplan Design Using a Hierarchical Neural Learning Algorithm, IEEE, 6/1991. pp. 2060-2063.	
72.	Zhou, H. et al., An Optimal Algorithm for River Routing with Crosstalk Constraints, 1996.	
73.	Zhou, H. et al., Global Routing with Crosstalk Constraints, Department of Computer Sciences, University of Texas, 1998, pp. 374-377.	
74.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514.	

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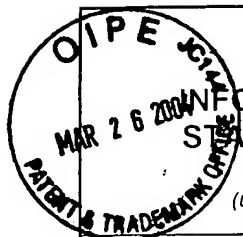
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Examiner Name	Stacy A. Whitmore		
Attorney Docket Number	SPLX.P0089		
Sheet	1	of	1

## NON PATENT LITERATURE DOCUMENTS

Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>n</sup>
	1.	Kastner R et al.: "Predictable Routing" IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000. Pages 110-113.	
	2.	Jiang Hu et al.: "A Timing-Constrained algorithm for Simultaneous Global Routing of Multiple Nets" IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA USA, 5-9 Nov. 2000. Pages 99-103.	

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				First Named Inventor	Steven Teig
				Group Art Unit	2812
				Examiner Name	Stacy A. Whitmore
				Attorney Docket Number	SPLX.P0089

**RELATED U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document Number	Date of filing MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Related Application Data
	1.	2003/0079193	12-07-2001	Steven Teig et al.	Parent application; present application is a continuation of 2003/079193.
	2.	2003/0018947	12-07-2001	Steven Teig et al.	Application filed on the same day as the parent application 2003/0079193, with the same specification as the present application except for summary and abstract.
	3.	2002/0147958	10-19-2001	Steven Teig et al.	Parent application per the preliminary amendment dated 2/19/03.
	4.	2003/0063614	01-04-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.
	5.	2003/0064559	01-04-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.
	6.	2003/0063568	01-04-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.
	7.	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193.
	8.	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0101428 does not accurately reflect the claims of S/N 10/040,915.
	9.	2002/0166105 S/N 10/040,948	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193.
	10.	2002/0166105 S/N 10/040,948	01-052-002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0166105 does not accurately reflect the claims of S/N 10/040,948.
	11.	2003/0043827 S/N 10/040,953	01-052-002	Steven Teig et al.	Continuation of 2003/0079193.
	12.	2003/0043827	01-052-002	Steven Teig et al.	This Preliminary Amendment is submitted as

Examiner Signature	Date Considered
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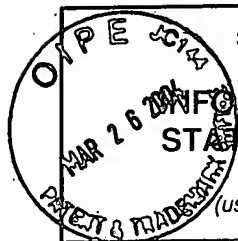
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Sheet	2	SP	4	Application Number	10/047,978
				Filing Date	1/13/02
				First Named Inventor	Steven Teig
				Group Art Unit	2812
				Examiner Name	Stacy A. Whitmore
				Attorney Docket Number	SPLX.P0089

## RELATED U.S. PATENT DOCUMENTS

		S/N 10/040,953			the publication 2003/0043827 does not accurately reflect the claims of S/N 10/040,953.
	13.	2003/0023943 S/N 10/040,954	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193.
	14.	2003/0023943 S/N 10/040,954	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0023943 does not accurately reflect the claims of S/N 10/040,954.
	15.	2003/0066042 S/N 10/040,963	01-05-2002	Steven Teig et al.	Continuation of 2003/0079193.
	16.	2003/0066042 S/N 10/040,963	01-05-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0066042 does not accurately reflect the claims of S/N 10/040,963.
	17.	2002/0174412 S/N 10/040,942	01-07-2002	Steven Teig et al.	Continuation of 2003/0079193.
	18.	2002/0174412 S/N 10/040,942	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0174412 does not accurately reflect the claims of S/N 10/040,942.
	19.	2003/0088844 S/N 10/041,957	01-07-2002	Steven Teig et al.	Continuation of 2003/0079193.
	20.	2003/0088844 S/N 10/041,957	01-07-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088844 does not accurately reflect the claims of S/N 10/040,957.
	21.	2002/0199165 S/N 10/046,864	01-13-2002	Steven Teig et al.	Continuation of 2003/0079193.
	22.	2002/0199165 S/N 10/046,864	01-13-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0199165 does not accurately reflect the claims of S/N 10/046,864.
	23.	2003/0066043	01-13-2002	Steven Teig et al.	Continuation of 2003/0088844 per preliminary amendment.
	24.	2003/0115566	01-13-2002	Steven Teig	Continuation of 2003/0088844 per preliminary amendment.

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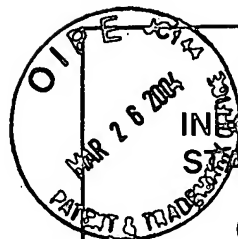
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First Named Inventor	Steven Teig		
Group Art Unit	2812		
Examiner Name	Stacy A. Whitmore		
Attorney Docket Number	SPLX.P0089		
Sheet	3	SP	4

## RELATED U.S. PATENT DOCUMENTS

25.	2003/0056187 S/N 10/047,982	01-14-2002	Steven Teig et al.	Continuation of 2003/0079193.
26.	2003/0056187 S/N 10/047,982	01-14-002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0056187 does not accurately reflect the claims of S/N 10/047,982
27.	2003/0066044	01-13-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.
28.	2003/0066045	01-13-2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract.
29.	2002/0133798	12-06-2000	Steven Teig et al.	Application regarding related placement technology
30.	2002/0100007	12-06-2200	Steven Teig et al.	Parent application; present application is a CIP of 2002/0100007.
31.	2002/0073390 S/N 09/737,210	12-13-2000	Steven Teig et al.	Application regarding related placement technology
32.	2002/0073390 S/N 09/737,210	12-13-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0073390 does not accurately reflect the claims of S/N 09/737,210
33.	S/N 09/737,220	12-13-2000	Steven Teig et al.	Application regarding related placement technology
34.	S/N 09/737,245	12-13-2000	Steven Teig et al.	Application regarding related placement technology
35.	S/N 09/739,460	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
36.	2002/0124231 S/N 09/739,580	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
37.	2002/0124231 S/N 09/739,580	12-15-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2002/0124231 does not accurately reflect the claims of S/N 09/739,580.
38.	S/N 09/739,589	12-15-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
39.	S/N 09/742,171	12-19-2000	Steven Teig et al.	Continuation of parent 2002/0100007.
40.	2003/0121015	12-19-2000	Steven Teig et al.	Continuation of parent 2002/0100007.

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Group Art Unit 2812

Examiner Name Stacy A. Whitmore

Sheet 4 SP 4 Attorney Docket Number SPLX.P0089

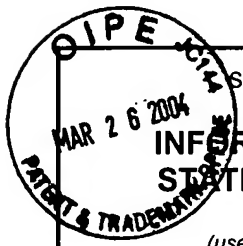
**RELATED U.S. PATENT DOCUMENTS**

		S/N 09/745,067			
41.	2003/0121015 S/N 09/745,067	12-19-2000	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0121015 does not accurately reflect the claims of S/N 09/745,067.	
42.	2002/0069397	01-13-2002	Steven Teig et al.	CIP of parent 2002/0100007.	
43.	2002/0170027	02-20-2002	Steven Teig et al.	CIP of parent 2002/0100007.	
44.	2002/0157075	02-20-2002	Steven Teig et al.	CIP of parent 2002/0100007.	
45.	2003/0088841 S/N 10/329,241	12-23-2002	Steven Teig et al.	Application regarding related placement technology.	
46.	2003/0088841 S/N 10/329,241	12-23-2002	Steven Teig et al.	This Preliminary Amendment is submitted as the publication 2003/0088841 does not accurately reflect the claims of S/N 10/329,241.	

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**U.S. PATENT DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	1.	2003/0121017	A1	06-26-2003	Andreev et al.	
	2.	6,088,519		07-11-2000	Koford	

**NON PATENT LITERATURE DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	3.	Chen et al., Optimal Algorithms for Bubble Sort Based Non-Manhattan Channel Routing, May 1994, Computer-Aided Design of Integrated Circuits and Systems, IEEE Transactions Volume: 13 Issues, pp. 603-609.	

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